

Attorney Docket No. 5515.214-US  
Serial No. 09/886,311  
Filed: June 21, 2001  
Inventors: Knudsen et al.  
Via Express Mail Label No.: 732210398 US

### **Amendments To The Claims**

The listing of claims will replace all prior versions, and listings, of the claims in the application.

### **Listing Of Claims:**

Claims 1-91 (Cancelled)

Claim 92 (Previously Presented) A derivative of an analogue of exendin-4 where said analogue has an amino acid sequence that differs from the amino acid sequence of exendin-4 by the substitution of up to ten amino acid residues with any  $\alpha$ -amino acid residue, and wherein said derivative has one lipophilic substituent attached, optionally via a spacer, to an amino acid residue of said analogue which is not the N-terminal or C-terminal amino acid residue of said analogue.

Claim 93 (Previously Presented) The derivative of claim 92, wherein said analogue has an amino acid sequence that differs from the amino acid sequence of exendin-4 by the substitution of up to six amino acid residues with any  $\alpha$ -amino acid residue.

Claims 94-95 (Cancelled)

Claim 96 (Currently Amended) The derivative of claim ~~94~~ 92, wherein the lipophilic substituent has 4 to 40 carbon atoms.

Claim 97 (Previously Presented) The derivative of claim 96, wherein the lipophilic substituent has 8 to 25 carbon atoms.

Claim 98 (Previously Presented) The derivative of claim 96, wherein the lipophilic substituent is attached by means of a spacer.

Claim 99 (Previously Presented) The derivative of claim 98, wherein the spacer is an unbranched alkane  $\alpha,\omega$ -dicarboxylic acid group having from 1 to 7 methylene groups.

Claims 100-103 (Cancelled)

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Claim 104 (Previously Presented) The derivative of claim 96, wherein the lipophilic substituent is a straight-chain or branched acyl group.

Claim 105 (Previously Presented) The derivative of claim 104, wherein the acyl group is of the formula  $\text{CH}_3(\text{CH}_2)_n\text{CO}-$ , wherein n is 4 to 38.

Claim 106 (Previously Presented) The derivative of claim 105, wherein the acyl group is  $\text{CH}_3(\text{CH}_2)_6\text{CO}-$ ,  $\text{CH}_3(\text{CH}_2)_8\text{CO}-$ ,  $\text{CH}_3(\text{CH}_2)_{10}\text{CO}-$ ,  $\text{CH}_3(\text{CH}_2)_{12}\text{CO}-$ ,  $\text{CH}_3(\text{CH}_2)_{14}\text{CO}-$ ,  $\text{CH}_3(\text{CH}_2)_{16}\text{CO}-$ ,  $\text{CH}_3(\text{CH}_2)_{18}\text{CO}-$ ,  $\text{CH}_3(\text{CH}_2)_{20}\text{CO}-$  or  $\text{CH}_3(\text{CH}_2)_{22}\text{CO}-$ .

Claims 107-120 (Cancelled)

Claim 121 (Previously Presented) The derivative of claim 92, which is  $\text{Arg}^{33}$ ,  $\text{Leu}^{20}$ ,  $\text{Gln}^{34}$ ,  $\text{Lys}^{18}$  ( $\text{N}^\epsilon$ -( $\gamma$ -aminobutyryl( $\text{N}^\alpha$ -hexadecanoyl))) Exendin-4-(7-45)- $\text{NH}_2$ .

Claim 122 (Previously Presented) A pharmaceutical composition comprising a derivative of claim 92 and a pharmaceutically acceptable vehicle or carrier.

Claim 123 (Previously Presented) A method of treating insulin dependent or non-insulin dependent diabetes mellitus in a patient in need of such a treatment, comprising administering to the patient a therapeutically effective amount of a derivative of claim 92 and a pharmaceutically acceptable carrier.

Claim 124 (Previously Presented) The derivative of claim 93, wherein said analogue has an addition of up to six amino acids at the C-terminus of exendin-4.

Claim 125 (Previously Presented) The derivative of claim 124, wherein the lipophilic substituent has 8 to 25 carbon atoms.

Claim 126 (Previously Presented) The derivative of claim 125, wherein the lipophilic substituent has 12 to 18 carbon atoms.

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Claim 127 (Previously Presented) The derivative of claim 93, wherein said analogue has an amino acid sequence that differs from the amino acid sequence of exendin-4 by the substitution of up to four amino acid residues with any  $\alpha$ -amino acid residue.

Claim 128 (Previously Presented) The derivative of claim 127, wherein the lipophilic substituent has 8 to 25 carbon atoms.

Claim 129 (Previously Presented) The derivative of claim 128, wherein the lipophilic substituent has 12 to 18 carbon atoms.

Claim 130 (Previously Presented) A pharmaceutical composition comprising a derivative of claim 93 and a pharmaceutically acceptable vehicle or carrier.

Claim 131 (Previously Presented) A method of treating insulin dependent or non-insulin dependent diabetes mellitus in a patient in need of such a treatment, comprising administering to the patient a therapeutically effective amount of a derivative of claim 93 and a pharmaceutically acceptable carrier.

Claim 132 (Previously Presented) A pharmaceutical composition comprising a derivative of claim 124 and a pharmaceutically acceptable vehicle or carrier.

Claim 133 (Previously Presented) A method of treating insulin dependent or non-insulin dependent diabetes mellitus in a patient in need of such a treatment, comprising administering to the patient a therapeutically effective amount of a derivative of claim 124 and a pharmaceutically acceptable carrier.

Claim 134 (Previously Presented) A pharmaceutical composition comprising a derivative of claim 127 and a pharmaceutically acceptable vehicle or carrier.

Claim 135 (Previously Presented) A method of treating insulin dependent or non-insulin dependent diabetes mellitus in a patient in need of such a treatment, comprising administering to the patient a therapeutically effective amount of a derivative of claim 127 and a pharmaceutically acceptable carrier.